NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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THIRD AGRICULTURAL MEETING

AT THE STATE HOUSE, JAN. 28, 1851.

Gen. Dearborn, Mayor of Roxbury, in the Chair,—Subject, "Thorough Draining and Subsoil Ploughing."

The President for the evening addressed the meeting at length on the general subject of Agriculture, with great ability and in an eloquent manner. He spoke of the great agricultural improvements in England by which her products had been doubled, tripled, and quadrupled in half a century. Other countries of Europe had also made great improvements.

In this country there had been but little legislative aid to agriculture until recently, though seven-tenths of the people were engaged in this branch of industry; and even at this time our general government had done nothing of consequence. Massachusetts took the lead in this business, and the subject was receiving attention by many other States. A few years ago science was a mere abstraction, but now it was applied to the practical purposes of life. It has done much for the mechanic arts and other professions, and when properly directed to agriculture, it will accomplish equally wonderful results for that branch. Our country has a diversity of climate and soil, and like China, with skilful cultivation, it is capable of supporting a vast population.

After this address, of which we cannot now give even a sketch, Gen. Dearborn announced the subject for the evening, and made a very few remarks on its utility. Mr. Whittaker read a letter from Col. Wilder in regard to the potato rot, in which it was stated that the potato had rotted in its native region, but as it was contiuually reproduced there, the inhabitants of that country did not seriously feel the calamity. He then remarked that a gentleman wished to offer a few propositions, and he called on Prof. Fowler, of Amherst.

Mr. Fowler thought that our discussions should lead to some definite information, and he proposed that a committee of two be appointed, who at the close of the discussion should propose certain questions on the subject discussed, leading to further investigation, and for discussion at the meetings another year. As an example of his plan, he then proposed some 10 questions in relation to the potato rot, the subject discuseed at the previous meeting.

The proposition of Mr. Fowler was favorably received by the meeting, and Mr. Fowler and Gen. Cushing were appointed a committee to effect the object proposed.

Mr. French, of Braintree, was called on, who gave a short history of draining and sub-soiling as it had its rise in Great Britain. He then spoke of his own experience, particularly in making drains under his walls, by which his land had been greatly improved, and even plants peculiar to dry lands had taken the place of aquatic productions. He had found these drains very profitable. Stones are used in various ways in making drains. Judge Buel used saplings for this purpose, placing them butt upwards, and the drains worked well 20 years after they were made. Mr. French showed draining tiles, of two patterns. They are made of clay, like that used for bricks; the length is about fourteen inches, the thickness about two-thirds of an inch. The calibre four inches. One kind is tubular, forming a pipe, with a flat surface on one side, to prevent its sinking in soft soils. The ends are square, and are placed against each other, without any insertion, and as the ends will not be tight, the water will run into them. The other is made in the same manner, excepting the sole or bottom is wanting, and they are intended to lay on a hard soil, such as a pan, or they may be laid on small or flat stones arranged for that purpose.

Mr. French spoke also of the very favorable effects of sub-soiling, by which the earth was stirred to a great depth. This system had produced wonderful effects in Scotland, where it was first introduced, and is now extensively practised.

Ex-Gov. Hill, of New Hampshire, being called on, addressed the meeting. He said that for several years he had taken a deep interest in the subject before the meeting. He thought that it was at the bottom of all other improvements. He considered the under layer of soil more valuable than the surface soil. He had been led to this practice from the favorable effects which he saw from it on the farm of the gentleman who had just spoken. He thought that by the application of sub-soiling to our light soils, they would become our most profitable lands. Our whole lands may become as a garden. He thought that capital and labor could be as profitable invested in farming in this part of the country as in any other place. The poorest soils by deep stirring may be greatly improved. By ploughing deep and mixing the manure well with the soil, it will do more good. On light soils it generally escapes at the surface from too shallow an application. Manures do not waste by descent. The soil or sand is generally pure below where the soil has become stirred.

Mr. Amasa Walker, Secretary of State, said that he purchased a piece of wet land, that did not yield any income. He thorough-drained it by digging drains three and a half to four feet deep, throwing the mud on one side, and the gravel on the other. After exposing the mud two or three years to the action of the frost and atmosphere, he hauled it into his barn-yard, and it was worth enough to pay for digging the ditches. The gravel was spread over the land with excellent effect. Highland grasses came in, and he got good crops where he applied no manure, but better where he manured. With a little manuring these lands continued to yield large crops of grasses, which cost him much less than grass raised on high land. He filled his drains to within one foot of the top, with stones from the high land, which were a nuisance there. He then inverted the sods on the stones and filled them up with materials from the ditch, which were left for that purpose. Mr. Walker remarked that when he was travelling in England some years ago, he was astonished at the great variety of ploughs used there. At Ransom's Agricultural House, there were 107 kinds of ploughs, and he was informed that 25 was considered an ordinary supply for one farm. But here one plough is often used for all soils, and for all purposes. We do not plough sufficiently.

Gen. Cushing, of Newbury, read a letter handed to him by an intelligent Scotch agriculturist, on draining, which he read. It was stated that when draining was first introduced into Scotland, the drains were made about one and a half to two feet deep, and about 18 feet apart. After 10,000 miles were laid, it was found that they were not sufficient. Then they were made from two and a half to three feet deep, and forty feet apart. This system cost less, and was more effectual. A great depth, with a great distance, was tried, but with unfavorable results.

The discussion continued on Page 66.

FINE SUFFOLK PIGS.

We have noticed at the stall No. 28 Faneuil Hall Market, a fine lot of Suffolk pigs, which were raised, fatted, and brought to market by Mr. J. L. Lovering, Hartford, Vt. These pigs, 12 in number, weighed 3,470 lbs. In age they ranged from 6 to 14 months, only two were over a year old, and they weighed over 400 lbs. apiece. Some that were 10 months old weighed 300 lbs.

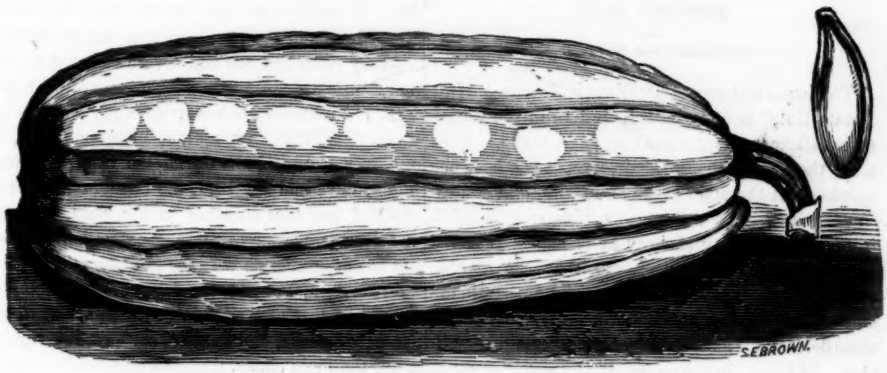
These pigs were fattened largely on apples. They were also fed on small potatoes, and corn meal. Mr. L. like most other persons who keep the Suffolk breed of hogs, think that they produce more pork in proportion to the food that they consume, than any other breed. This breed is of a moderate or rather small size, compactly built. The head, legs, and tail are very small; and the bones are very small. The flesh is thick on all parts of the body, and the skin so thin that the blood veins appear very prominent through it.

The smallness of the least valuable or waste parts, is not the only advantage in this deservedly popular race of hogs, for the flesh is very tender, of a fine texture, and remarkably sweet. We consider the pork decidedly superior to that of our common breeds. The very peaceable disposition of this breed is no small recommendation. Mr. L. can fill orders for live pigs.

HOW COAL SHOULD BE CONSUMED.

Notwithstanding the general use of anthracite coal in families, few persons know exactly how to use it properly. This business is usually entrusted to servants, and as their experience has taught them—the more wood the more fire—they throw on the coal on the same principle, expecting the same results. This practice, however, destroys the draught necessary to consume the coal, and the consequence is that the sulphuric gases, instead of being consumed, are dispersed through the rooms of the house, to the injury of health, and frequently the spoiling of the food in the process of cooking. No stove should ever contain, on a fair average, a greater layer than four inches of coal—less in a majority of cases will answer. A beautiful red heat is then generated, the coal parts with all its inflammable elements, and deposits its earthy matter in fine particles in the receiver. Try the experiment and see the results. Anthracite would be the only fuel used for domestic purposes in every family, if the proper mode of making a coal fire was more generally understood.—*Public Ledger.*

VEGETABLE PERFUMES.—The leaves of southron-wood, like those of all other plants having highly scented leaves, will be found, if held up to the light, to be full of transparent dots. These are cells containing the fragrant oil which gives out the perfume. By bruising the leaves these become broken and the scent stronger.



CUSTARD SQUASH.

For the New England Farmer.

CUSTARD SQUASH.

Mr. Cole:—Having raised this squash, the last summer, and proved its qualities, I herewith send to you a description and figure of it, with a parcel of the seeds for distribution.

It is *a winter squash with a hard rind*, and is said to have been brought from the city of New York to Waltham, where some of the fruit was grown in the summer of 1849. The friend who gave me this account, favored me with seeds, which were planted on the 25th of last May. Previously, however, in February or March, I saw the same kind of squash in Boston market, and was told that it came from the *West Indies*, and I think it highly probable that it originated there. Nevertheless, it is perfectly well adapted to our latitude and climate, having grown and ripened in my garden, the last summer, which was not a favorable season for this kind of fruit.

My squashes were gathered on the 8th of October. Some of them were soon used for puddings or pies, as they are often called, and were found to be very good for that purpose. The flesh, when stewed, was tender throughout, and lighter colored than that of our common winter squashes, but inferior in flavor. It was easily separated, by scraping from the thin and tough rind which, did not become tender by cooking. As a sauce, with meat, it is not so good as the crook-necked, and much inferior to the marrow squash.

One of these squashes was kept till the 22nd of January. It weighed 18 1-2 pounds; was 16 1-2 inches long, and 2 feet, 2 inches in circumference around the middle. Form, elongated elipsoidal; slightly depressed at each end; longitudinally ten-ribbed, five of the ribs corresponding with the angles of the stem, more prominent than the others. Scar at the blossom-end small, about one-quarter of an inch in diameter. Rind smooth, with a few irregular elevations on it; harder than that of the crook-necked winter squash, but not woody, about as thick as press-paper and of a dark cream or cheese color. Flesh 1 1-4 inch thick, deep yellow, very firm and fine-grained throughout. Seeds numerous, whitish, oblong oval, truncated at base, and, like those of pumpkins and squashes, furrowed all round within the margin.* Like the latter, also, they are connected by orange-colored fibres to the sides of the fruit, in six parcels, each parcel consisting of three ranks of seeds. The membranous partitions, dividing the cavity of the squash into three cells, though broken away from the sides, had not entirely disappeared. Fruit-stem 6 inches long, slightly enlarged next the fruit, with five rounded edges of angles, and as many deep intervening furrows, in the bottom of each of which was also an elevated line or ridge.

The vines, leaves and blossoms do not differ essentially from those of the common winter pumpkin and winter squash.

Yours, truly, T. W. Harris.

Cambridge, Jan. 25, 1851.

* An outline of the seed is given of the natural size.

Remarks.—We are much obliged to Dr. Harris, for his valuable contribution. We have already distributed most of the seeds. A very fine specimen of this squash weighing 16 lbs. is now before us, raised by Mr. Raynolds, one of our publishers, on his place in Concord. He thinks much of them as to their quality, production and keeping. They ripened well last season, though it was rather cool for plants from a tropical climate. Dealers in the market, who frequently have this squash from the West Indies, say that it sometimes succeeds well here, but is rather uncertain.—Ed.

Corrections.—In a recent article on sheep, by Mr. Bridge, a remark runs thus: "My entire flock of breeding ewes and lambs averaged at the last shearing, 4 lbs., 2 ounces." For 2 ounces, read 6 ounces. Towards the close of his article, for *curors* read *curves*.

☞ We have several communications on hand, which will appear soon.

Swimming Stockings.—Among the newest inventions are swimming stockings, acting on the same principle as the webbed feet of aquatic birds. They were tested by one of the members of the British association, who, with their aid, swam from New Haven to Leith Harbor, against tide.

POTATO ROT.

Concluded from Page 46.

The important question "What is the cause of the Potato Rot," is often asked, and to this question no satisfactory answer has ever been given. Ever since the prevalence of the disease, it has been our opinion that the main cause is in the *atmosphere.* We are aware that this answer, if correct, is indefinite, and it is unsatisfactory as it shows that the cause is beyond our control, and it affords no clue to a remedy. There may be a slight change in the constitution of the atmosphere, or it may contain some deleterious substance that affect certain vegetables. If fungus is the cause of the rot, the seeds of the fungus float in the atmosphere, and are too minute to be perceptible to the naked eye.

The question is often asked, "Why are not animals diseased as well as the potato, if the cause is atmospheric." A knowledge of the anatomy and physiology of animals and plants, and the constituent elements of the atmosphere, shows the impropriety of this question. The atmosphere may be fraught with destruction to vegetation, and yet be healthy to animals, and the reverse. In 1849, the cholera prevailed to some extent in this country, and the dysentery was very common and fatal, yet there was but very little potato rot. In 1850, the potato rot was more severe than it was ever known before, and the other diseases were no more prevalent than is generally the case. The very breath exhaled by animals, which is destructive of animal life, contains nutriment for vegetables, and the gas evolved by the growing vegetables contains the principles of vitality for animals. Hence the purity of the atmosphere in elevated forests, and in verdant fields, and the propriety of animals and vegetables living together. The expiration of one is food for the other.

During the prevalence of the potato rot, other vegetables, such as carrots, onions, turnips, &c., have been affected with a blight also, and such as was not known, and some have stated, previous to the potato rot.

There are other diseases that affect potatoes besides the rot, and various insects also injure or destroy them, and these affections or injuries are generally all considered as the result of the potato rot. In this respect a great mistake was made the last season. Generally, previous to the rot, there was a very severe case of the rust on potatoes, which prevented their growth, so that in some cases there were no tubers at all. This disease generally cut short the crop of late planted potatoes, in this section, one-half, and what were produced were inferior both in size and quality; so that if no rot had prevailed last year, the crop of late planted potatoes would not have been worth more than one-third of what it used to be in years past. We speak of its value for consumption, not its price in the market. In addition to the loss by rust, the rot destroyed most of the poor crop that was produced.

Many years ago, we had severe cases of the rust, and the consequence was a light crop of poor potatoes. We have known warm, muggy weather continue, with little interruption, for three weeks, and one season, which was during the last war between this country and England, the rye that was cut and shocked, and that standing in the field, vegetated and grew from one to two inches in length, looking as flourishing as we ever saw any starting from a fertile field; yet in those days there was no potato rot like that of recent date, which shows that it is a new disease, and that the state of the weather is not the main cause, though a powerful predisposing cause, having far more influence than any other, and perhaps as much effect as all other secondary causes.

We will now consider some of the most effectual modes of preventing the rot. On this point we shall be met by some persons who say that all precautions are useless; that what avails in one case, has no effect in another. They might as well say that it is useless to take precautions against the cholera, dysentery, small pox, or other disorders in the human race, or using any medicines to mitigate their malignity, because in some cases all precautions fail, and medicines have no effect.

The first important requisite in guarding against the rot, is to cultivate those varieties that are generally hardy and resist the disease, and which, in severe cases of rot, are liable to less injury than the tender kinds. In all cases of making improvement in animals and vegetables, the cheapest and most economical mode is to procure the best breeds or varieties to propagate from. A single animal that costs the farmer 50 dollars extra, may profit him 50 dollars annually. An ear of corn, or head of wheat, or some other valuable seed that costs him only a few cents, in the beginning, may add to the value of his crops many dollars annually. The seed obtained may pay a thousand fold on the cost, and the time spent in producing it.

If this valuable rule was applied to the raising of potatoes, having particular reference to hardiness, as well as other good properties, but making hardiness the leading object, we should not hear so much about the sad effects of the potato rot. In common seasons of this disease, they would be only slightly affected, and in the most severe cases the greater part would escape destruction. We have urged the importance of this course for years, but some farmers have neglected it, and cultivated the tenderest kinds, and the consequence has been the occasional loss of nearly all the crop.

We have cultivated 60 varieties of standard potatoes, and 200 kinds of seedlings, and made numerous experiments, year after year, to test their hardiness. We have also learned from observing the fields of others, and gathered facts from numer-

ous farmers on this subject; yet we doubt not that the result of our experience and observation is very different from that of some other experimenters; and every farmer should make experiments for himself, as there may be in his neighborhood some valuable kinds not generally known.

In our experiments last season, to which we refer, we planted late—say the latter part of May—and they mostly rotted, so it was a very severe test. Since dug, scarcely any have rotted.

Chenango, *Mercer*.—This is a very popular potato in the market, and is cultivated throughout the country more extensively than any other kind. It is very apt to rot. In favorable seasons, and under favorable circumstances, but very few rot, but when season and circumstances are against it, they nearly all rot. Thus they fail when potatoes are in great demand. In our experiment last season seven-ninths rotted. We have better kinds, some for early, and others for late use, which yield more.

Carter is an excellent potato, but much inclined to rot. Last season five-sixths rotted.

Snowball has been considered by some identical with Carter, but it is different. The quality is very fine; the yield middling. Last season, they all rotted.

Early Purple.—This is often called Early Blue, but it is not the old rough coat Early Blue, well known in this country many years ago. These nearly escaped rot, and probably from their great earliness. Only two-seventeenth rotted last season, in our experiments.

Hall's Early.—A fine early potato, and it yields well. It is better than Hill's Early, and yields more than that or the Chenango. Last season one-half rotted.

Early Worcester, *Riley*.—This variety seemed proof against the rot until last season, even when planted on wet land. Comparatively it is a hardy kind. Last season one-third rotted. It is as early or earlier than the Chenango, and is more mealy early in the season. For late use, it is too mealy. It out-yields most other kinds known to us. It yields about as much as the Long Reds and other prolific varieties. The greatest objection to it is that the tubers are rather small, though many in a hill, like the Forty-fold potato.

Early White Blue Nose, *Eastport*.—This potato is very apt to rot. As it yields poorly, we have discarded it, as the Early Purple is as early, as good, and it is larger and yields more.

Buffalo Pink is a potato of most excellent quality, but it does not yield very well, and it is very apt to rot. Last season two-thirds rotted.

Wait's Long, is a very long white potato, that yields very largely. As it is a late kind, and the tubers but partially grown, it was more exposed to rot than early kinds, and this remark will apply to late kinds generally. Last season four-fifths rotted.

Long White is a seedling from the Butnam, and it resembles Wait's Long in appearance, lateness, and yield. Last season two-thirds rotted.

Long Red, *Merino, Long John*.—This variety is well known throughout the country. Many farmers say that it has escaped the rot about as well as any variety. There is one thing peculiar about it. Frequently it is less rotten than other kinds at digging, but is much inclined to rot after it is dug. Last season, in our experiment, two-thirds rotted.

Dean, *Veto, Abington Blues*.—This potato yields largely, and it is of a good quality, particularly for a late potato; but it is very apt to rot; one of the most tender kinds. It generally yields about as much as the Long Red, but in our experiment last season, the yield was very light, owing to the rust—not half so much as the Long Red—and seven-elevenths rotted. When the rot is rather light, this is often considerably affected.

Black Potato, *Black Chenango*.—This is a remarkably hardy kind, against rust, rot, time, and other hard cases which the potato meets. It yields nearly as much as the most prolific kinds. Last year it yielded as much as the Long Red, and only one-fifth rotted. Previous to last year, we seldom saw any rot in this variety; and several farmers have spoken of its hardiness. This potato has never been justly estimated, excepting by a few individuals; it is not a favorite in the market, and poorer potatoes sell better. Few know how to cook it. It should boil one-quarter or one-third longer than other kinds, and then it is greatly improved by steaming a few minutes. It keeps remarkably pure, having no defects, like Chenango, Long Red, and some others.

Peach Blow.—This potato has been much admired by some, and condemned by others. It yields well, the quality is good, and it usually sells at a good price in the market. It is hardy against the rot. But there is a disease peculiar to this variety. When we have had forty of fifty kinds all growing together and in a flourishing condition, early in the season, the Peach Blow has been affected with the curl in the leaf, sometimes to the extent of half the hills, and potatoes were produced no larger than common potato balls. Several farmers have met with the same trouble with this potato; others say that it has always done well with them. Such may do well to continue it. As we had excluded it, we did not subject it to the severe test last year.

Butnam is of superior quality, but it yields rather lightly. It is tolerably hardy against the rot.

Kidney yields tolerably well, and the quality is very good. It is tolerably hardy.

St. Helena generally yields a little less than the Chenango, and it is less liable to rot; yet it rots readily. The quality is very good, and it is very saleable in the market.

Ladies Fingers.—This is an excellent potato for baking, but not good for boiling. On dry soils in good condition it yields well. We have heard,

in different parts of the country, of this variety rotting less than most other kinds, yet in some places it has rotted to considerable extent.

The four varieties last named were not in our experiment last year; which was by far the most severe case of the rot.

Sealsfoot.—They yield middling; the quality excellent. Generally it has rotted but little; but last season, the yield was very light, by reason of the rust, and seven-fifteenths rotted.

Orange or English Orange, Lafayette, Pink Eye, Wait's Round, Hancock, Waterloo, Parker, Cranberry and several other varieties yield pretty well, and some of them are tolerably hardy against the rot; but they are usually hard, heavy potatoes. If we had room, we would discriminate more nicely as to these and several other kinds. Last season four-fifths of the Cranberry rotted, and all of the Lafayette.

We have never known any variety of potato to resist the rot perfectly, when it has been very severe. The nearest to an escape was a seedling in our experiment last season, which was the third year from the seed, and had not rotted before. In six pounds only one small potato was rotten. It is yet doubtful about its yield, quality and hardiness. Another seedling, of the same age, was but slightly affected. Only half a pound rotted in eight pounds. But generally our seedlings rotted as much as our standard varieties. Many were all rotten.

We have gone into this part of the subject at length, as it is of much importance, and had proper attention been paid to it, the farming community would have saved to the amount of millions of dollars in potatoes; and many consumers would have found a good supply at moderate prices. We would caution the cultivator about depending implicitly on our statements as settling any points as to the hardihood of different kinds, as the results of experiments vary in seasons, with time of planting, &c. Our object is to throw out some useful suggestions that may serve as a clue and lead to a more thorough investigation on this subject.

A proper selection of soil for potatoes is an important consideration. We used to get our largest and best crops of potatoes, especially in warm summers, on rather moist, cool soils; but on such soils the potato is very liable to rot. Sandy and gravelly soils, or light loams, should be preferred, where heavy rains subside immediately. In a very few cases only, potatoes have escaped the rot on wet land, while they have generally decayed. This is an exception to the general rule, and may be owing to peat, or some preservative substance in the soil. Manures have an important effect. All manures that are not well decomposed before applied, whether animal or vegetable, are liable to ferment in the soil, and produce too much heat, and rapid growth, rendering the potato plant tender from its great luxuriance, and more susceptible of disease. Therefore in applying manure not well decomposed, or an abundance that is decomposed, it is better to mix it with the soil generally, and not apply it in the hill, lest it induce too rapid growth.

Mineral manures, such as ashes, lime, salt, plaster, and also charcoal dust, soot, guano, and some other specifics, have, apparently, at times been useful in preventing the rot, and again they have failed, so that we have nothing very satisfactory or conclusive on these points. They are still subjects for further investigation.

There is a great advantage in selecting for potatoes new lands fresh from the forest, or pasture lands that have not been tilled recently, which retain natural richness sufficient to yield a good crop without manure. On such lands the potato is not only less liable to rot than on old lands, but the quality is far better. We might arrange a rotation of crops, so as to have a well decomposed sward as a manure for the potato crop.

One of the best preventatives of the potato rot is early planting, by which the crop is grown during favorable weather, and can generally be harvested the latter part of August, when the weather is dry. In such cases the crop generally keeps well. It is a false view of the subject to omit digging till late, in order that all that will rot, may rot before digging. There are cases in which potatoes are already decaying fast, and they may as well rot in the ground as out of it, as digging will not arrest the disease.

By early planting the crop is generally matured before the warm, wet or dog-day weather, which is a great secondary cause of the disease, and without which it will have but little effect. If potatoes cannot be planted early, and are planted tolerably early, there may be an advantage in planting early kinds, that they may ripen before unfavorable weather.

Greening the seed by exposing it to the sun and air, as recommended by Dr. Hogan, in his interesting article on this subject, in our last number, has been practised to considerable extent and with good results in England. It has also been considered a useful practice, to dig the potatoes before quite ripe that they may be more vigorous for seed. But little attention has been given to changing seed in this country for the purpose of preventing the rot, as recommonded by Dr. Hogan; yet a great many changes have been made, in procuring new varieties for experiment, and in using for seed potatoes that have been sent a great distance to market.

On the preservation of potatoes, we have room for only a few remarks, though it is a prolific subject. They should be dug in dry weather, and exposed to the sun or air till well dried. Much exposure injures the quality very much. Then house them in a dry cool place, spreading them for the double purpose of preventing heating and rotting, and affording a convenient opportunity of examin-

ing them frequently, and removing all that are decaying. Many farmers have found a great advantage in strewing lime on plaster among potatoes after harvested. In this way the disease has often been arrested, when it was proceeding rapidly with the work of destruction. The mode of saving by fumigating with sulphur, as recommended last year by Dr. Hayes, is very troublesome, and it does not generally succeed.

The modes generally adopted to save potatoes from the rot, injure their quality very much, hence they are generally of an inferior quality since the rot has prevailed. All exposure to the air and sun, whether in casks or not, also in keeping them in warm stores, and spreading out to the air, though tending to prevent the rot, are destructive to the fine qualities of good potatoes, so that they are often saved from the disease, and yet nearly lost in quality. Before the rot prevailed, the best way of saving potatoes, was to dig and turn them into a cart, and then cover them with a rug, and in a few hours put them into the cellar, in large close bins, slightly moist, as they come from the soil; and they were better for keeping the cellar dark and close, and covering the bins with hemlock or other evergreen boughs. But those palmy days for potatoes are past, and now our mode exhibits a paradox, as we *lose* the potato in *saving* it.

If the rot continues, further experiments and more thorough investigation will lead to a more systematic and successful mode of cultivation and management, that will enable us to avoid the evil, in a greater measure. The reader will please excuse the length of this article, which has exceeded our intentions at the commencement, and yet we have omitted many things.

For the New England Farmer.

SELECTION AND CULTIVATION OF FLOWERS.

Mr. Editor:—Although I should prefer native plants for a small collection, there are still many flowers of foreign origin, which, by long cultivation or similarity of climate, have become perfectly hardy, and in forming a large assortment it is desirable to select the most beautiful kinds from different sections.

Among these, perennials require the least care, and are generally the hardiest. One of the earliest as well as the most beautiful is a dwarf species of Iris, sometimes called Lily of the Valley. The petals are of a delicate blue, with a rich velvet texture, and it blossoms profusely; it should be placed in a slightly elevated situation, as the flowers rise but a few inches from the ground; if placed on the south side of a building, it will blossom much earlier.

There is another variety of Iris generally called Flower-de-luce which grows much larger, flowers later, and is generally beautiful; a variety of Iris called Blue Flag grows abundantly in meadows and along the banks of streams.

The common Peony is known to almost every one, and is a very showy as well as hardy plant.

The various species of perennial Phlox, although some of them appear rather coarse upon close inspection, are extremely showy at a little distance, and as they blossom at different seasons, they form a succession lasting nearly through the summer; when well rooted, they are not easily destroyed.

The Scarlet Lychness, with its large bunches of scarlet flowers, is highly ornamental and easily cultivated.

But the flower which has attracted the most attention in my collection, is the Grand Flowering Larkspur. It continues flowering for a considerable length of time; its petals are quite delicate and of a rich blue color, and its leaves are somewhat ornamental, giving it an imposing appearance without presenting anything of that coarseness to which large plants are liable.

The Pink, although not as hardy as the flowers which I have named above, may be cultivated without difficulty, by raising plants from seed every two or three years, and the species are so numerous that a very respectable flower garden might be filled with Pinks alone. Among the most beautiful, are the Carnation Pink, the Double Grass Pink, and the Bunch Pink or Sweet William; the flowers of the latter are fascicled, continue a long time in bloom, and present almost every variety of color from white to dark velvet red. Nearly all the varieties are sweet-scented, which makes them universal favorites.

The Tiger Lily, the Monk's-hood, Columbine, and Burgundy Rose, are also worth a place in a large collection, although the latter is not perfectly hardy.

There is another class of plants which are called annuals, but which may be made to become perennial in this climate if kept in the house in winter. In spring they may be increased by cuttings to any desired extent. The Petunia and Verbena are examples of this class, and may in this manner take their places among the finest ornaments of the garden.

The best method of raising plants by cuttings is to place them in a slight hot-bed in such a manner that one joint may be above, and one below the surface of the ground; they should be well watered and partially protected from the rays of the sun. If this cannot be done, they may be planted in a flower-pot, and a common drinking glass inverted over them.

Annuals are generally more difficult to cultivate, but some of them are pretty hardy. The seeds should be protected from the sun and beating rains by laying something over them; I have found coarse straw as good as any thing; it should be fastened at the ends to prevent the wind from blowing it away, and it should be removed before the young plant makes its appearance.

Among the most beautiful annuals may be named Drummond's Phlox, the China Aster, Branching Larkspur, and for training on walls or against the sides of houses, the Blue and Purple Morning Glory, Sweet Pea, Crimson Cypress Vine, and Nasturtium or Indian Cress.

The Balsam is very hardy, and if any method could be adopted to secure double flowers, would be very fine.

The Double French Marygold and the Striped African Marygold are easily cultivated, and, although not so fine as many other flowers, are somewhat ornamental.

The Globe Flower or Bachelor's Button is among the finest, but the seed is very liable to fail unless sown under glass; the plant may, however, be transplanted into the open ground at any time after they are fairly started. The crimson blossoms of this plant, if picked just before the frost comes, will retain their form and color all winter.

Those who wish to see specimens of various flowers before they undertake their cultivation, will find from sixty to seventy figured annually in the American Flora, published by Green & Spencer, New York. W. F. B.

Ashfield, Jan. 20.

For the New England Farmer.

PLOUGHS AND PLOUGHING.

Mr. Cole:—I have noticed with much interest in the agricultural papers the past season, the discussion of the subjects of ploughs and ploughing—of the narrow slice and broad slice, the deep and the shoal—turning the sod over flapjack fashion and setting it upon edge. The experience of fifty years and more forbids my concurrence in the modern doctrine of narrow furrow and slice set up edgeways. I mean in turning up sward ground. As to ploughing old grounds, corn hills, stubble, &c., it is no new thing to use small ploughs, and cut narrow furrows so as to pulverise the soil.

When a boy, and I first began to drive or hold, I thought I could plough faster with the large breaking up plough on the old ground, but my father would not permit, and told me to use what was then called the old ground or seed plough—and cut narnow furrows more thoroughly to pulverise the soil. The intelligent farmer will consider the nature and condition of the soil he is to cultivate, and the object he has in its cultivation, and then adapt his operations and instruments to the object in view—different soils require different treatment. Our best ploughs for our New England soils, rocky, clay or sandy, would be but sorry implements on the prairies of the West.

Some correspondents of agricultural papers, however, seem to prescribe the same mode for all ploughing—of sward ground or otherwise, and whether the sward be tough or tender, deep or shoal, wet or dry, or the soil clayey, strong or sandy. Now this looks to me like book farming in the bad sense, and not the fruits of a series of practical experiments; for to an observing agriculturist his whole life of labor is but a series of experiments.

One object in breaking up the sward ground is to kill the vegetation then growing, root and branch and convert it into vegetable mould or manure. This surely cannot be done in case of strong sward by setting the turf up edgeways, and drying it. Try such by ploughing in the fall, and by planting time, if the season be dry, you will find the turf not in progress of decomposition, but dry as a sheep skin hung exposed to air and sun; or if the spring be wet the grass on the slice will be starting fresh as on the unploughed field.

But say the advocates of this new doctrine, you must let the air below the surface—let the sod be exposed to the air—the air must not be excluded by wide furrow slices laid over flat. I think a little careful observation will show that all needful air cannot be kept from the bottom of the turf by simply turning it over unless the soil is so wet that it seems like mortar, and closes the seams between the slices, in which condition no experienced farmer would desire to have his ground ploughed. The use of the roller over broke-up ground has been strongly recommended, and for the reason that it presses down the sod, prevents the vegetation from drying, and makes it ferment and rot. My experience fully confirms the benefit of this practice.

I have never been able on good tillage land when dry enough to plough—that is when the earth below the sod will pulverise as it is turned up, to lay the turf over too flat—too flat to destroy the vegetation and rot, and prepare it for the use of the cultivated crop for the first and second year of cultivation. Indeed, a valid objection is made to a two years course on strong sward land for the reason that the sod, the grass roots, cannot be thoroughly rotted and pulverised, and be well and smoothly laid down without a third years cultivation.

The objection I have to a narrow slice is that it cannot be so effectually turned over to prevent the grass from growing at the edge as in a wider one, especially if the plough is run as deep as the ground ought to be stirred. If the ground be strong it is difficult to keep the plough steady to its bearing unless you cut a slice so wide as to have a weighty pressure on the mould or furrow-board to prevent its being thrown out even by stones of a small size.

To turn the turf well and easily there must be a due proportion between its width and depth—say a foot wide to six or eight inches deep. Such was my practical experience when a boy, with the badly constructed ploughs of those days, and I find it the same with the greatly improved ploughs of the present day.

I intended to make some suggestions as to the nature of the improvements on the old ploughs of former days, but I find my sheet nearly covered, and I must defer them to a more convenient season.

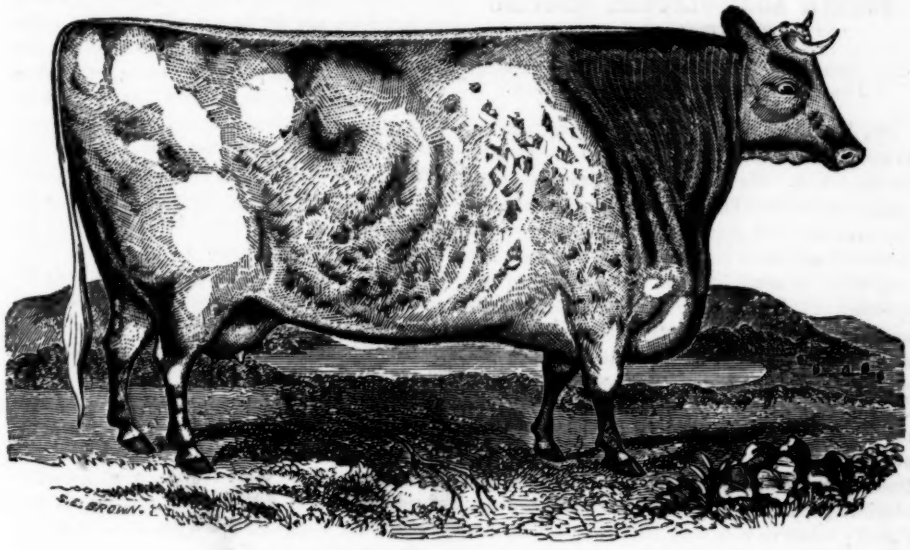
Rufus McIntire.

Parsonsfield, Me.

MASHED POTATOES.

How few know how to prepare good mashed potatoes? Those who are ignorant of the secret, may learn from the following receipt:—

Boil them perfectly tender quite through, pour off the water, and steam them very dry, peel them quickly, take out every speck, and while they are still hot, press the potatoes through an earthen cullender, or bruise them to a smooth mash with a strong wooden fork or spoon, but never pound them in a mortar, as that will reduce them to a close heavy paste. *Let them be entirely free from lumps*, for nothing can be more indicative of carelessness or want of skill on the part of the cook, than mashed potatoes sent to the table full of these. Melt in a clean saucepan a slice of good butter with a few spoonfuls of milk, or, better still, of cream; put in the potatoes after having sprinkled some fine salt upon them, and stir the whole over a gentle fire, with a *wooden* spoon, until the ingredients are well mixed, and the whole is very hot. It may then be served directly; or heaped high in a dish left rough on the surface, and browned before the fire; or it may be pressed into a well-buttered mould of handsome form, which has been strewed with the finest bread-crumbs, and shaken free of the loose ones, then turned out and browned in a Dutch or common oven. More or less liquid will be required to moisten sufficiently potatoes of various kinds.



SHORT HORNED COW, CAMBRIDGE.

This cow was bred by Thomas Bates, Esq., Kirklevington, Yorkshire, Eng., by whom she was exhibited, at the meeting of the Royal Agricultural Society, in 1840, when eight years old, where she won the first prize for the best cow of any age.

The Short Horned, or Durham breed of cattle hold a high rank in England, particularly for beef; and in some of the large milk establishments, this breed is preferred. In this country, particularly in the West, the introduction and general diffusion of this breed has made a vast improvement in stock, not only where this race is kept pure, but there has been great advantage in crossing it with the common breeds of the country, as blood stock generally stamps its peculiar characteristics upon the cross. The great gain by the use of the Short Horns is in their early maturity, by which they are as well ripened for beef at three years of age, as the common stock at four. Every farmer is aware that this is an important consideration.

This stock and its crosses are raised in large herds in the fertile West, and when fit for market, many of the animals are driven East, leisurely, and allowed to feed on the way, as the road-sides generally abound in good pasturage, so that they arrive in the New York or Brighton Market in as good condition as when they left their native pastures. In this way, the beef is not injured, and as it were poisoned, by hard driving and exhaustion, in hot weather.

As the pasturage of New England is not, generally, very luxuriant, nor the usual winter feed of cattle very high, the Short Horns are not esteemed very highly in this section of the country. Besides these unfavorable circumstances in regard to this stock in the Eastern States, but few animals are raised purposely for beef, as is the case in the West; but they are used for work or milk several years, then fattened for beef.

The Durham or Short Horned Cattle are not distinguished as milkers, though some breeders of this race are giving particular attention to the production of a variety that will have a milking strain, and as they have some good milkers to breed from, we trust that they will be successful.

As for labor, the Short Horns are very mild and tractable, and some farmers who have tried them regard them as very good in this respect; but as we have native cattle that possess all the requisites for labor, and some of them in a high degree, that can be obtained at less price than any blood stock, and which are considered better adapted to our cold climate and common fare than the Short Horns, they are not, of course, in demand for labor.

We have made a few scattering remarks as to some of the peculiar properties of this celebrated breed of cattle, and our columns are open to our readers for the expression of their views, whether they are in accordance with ours or not.

Chain of Beings.—Bitumen and sulphur form the link between earth and metals—vitriols unite metals with salts—crystalizations connect salts with stones—the amianthus and lytophites form a kind of tie between stones and plants—the polypus unites plants to insects—the tube-worm seems to lead to shells and reptiles—the water-serpent and the eel form a passage from reptiles to fish—the anas nigra are a medium between fishes and birds—the bat and the flying-squirrel link birds to quadrupeds—and the monkey equally gives the hand to the quadruped and to man.

FOURTH AGRICULTURAL MEETING

AT THE STATE HOUSE, FEB. 4TH, 1851.

Gen. Dearborn, of Roxbury, in the Chair—Subject "Thorough Draining and Subsoil Ploughing."

Mr. Asa G. Sheldon, of Wilmington, begged leave to make a few remarks not directly to the subject, for discussion. He said that there had been various improvements in farming, and amongst the greatest was that of the plough, by which the team was shortened and more performed, and he hoped this rule would be applied to our discussions, and the speeches of half or three-quarters of an hour shortened down to 10 or 15 minutes. He remarked that a farmer may soon tell what he knows that is important, but it takes him a long time to talk about what he does not know. Mr. S. then proceeded to the subject. About ten years ago, he drained a swamp, and in winter he applied a compost, one load of manure mixed with two loads of gravel. He obtained good crops of grass; and the land had continued productive with very little expense in manuring. He had not filled his ditches, as he thought it was best to proceed to reclaim more land, and fill up by and by, when more at leisure. The last piece of swamp he reclaimed, he let the ditch banks remain over a year, then spread them over the land, using no other manure. He had good crops of grass.

Mr. Whittaker, chairman of the committee of arrangements, said that it was the design of the committee to limit speakers to 15 minutes, and he made a motion to that effect, which was carried.

Dr. Hogan, recently from England, remarked tbat he had been 13 months with Mr. Smith, of Deanston, when he was making experiments in draining and subsoiling. At first his drains were made broad and shallow, but this was not effectual, as the water would spring up between the drains. He then deepened his drains, which proved a remedy for the evil. Mr. Smith did not subsoil until two years after draining, that the land might become consolidated. These processes greatly improve the quality of crops, as those grown on dry land are superior to those raised on wet land; and after land is drained the dew will afford much more nutriment to plants, as it has but little effect on wet land. Dr. H. showed a pattern of a plough for under-draining, by which a piece of soil is cut on each side by two cutters, and then risen up and displaced by a part of the plough that follows, leaving a hollow or drain, some distance below the surface.

Mr John C. Moore, formerly of Scotland, had prepared an article on this subject, which was in the course of publication, and he read it to the meeting. He was acquainted with Mr. Smith, renowned for his great improvements on this subject. He drained lands that were moderately moist three feet deep, and they would settle only a few inches, but in very wet lands he made his drains four feet deep, and the land would generally settle about one foot. In this way there is room for the drain, and for surface ploughing seven inches, and subsoiling twelve inches, without interfering with the drains. In Scotland it is customary to subsoil at every rotation of seven years, and after the first operation, it is easily done. Mr. Moore said that there was great advantage in underdraining even gravelly soils, as the rains and snows contain fertilizing properties, the great part of which often run off; but when the lands are underdrained, the water runs down, and enriches the soil. In proof of this, he gave the views of a friend who had much experience in draining gravelly soils. He thought that the running down of the water into the soil tended to the disentegration of the stones and greatly increased the crops. The drains should be three feet deep, and forty feet apart.

Col. Newell, of West Newbury, said that he had subsoiled about fifteen acres, some loam, and some gravelly soil. He found a very great advantage in subsoiling a stiff soil—moist, but not low land. He thought his crops of grass were doubled by this process. He ploughed the surface soil about seven inches deep, and subsoiled about ten inches deep. This mode was better than to plough twelve inches deep, as he had practised, and in this way the manure would do more good, as he had to manure a less depth. As the land was not very wet, the dead furrows answered for drains. As these lands were too moist for tillage, he could not tell what effect the subsoiling would have on corn, potatoes, &c. He had not seen much advantage in subsoiling gravelly soils; our climate is very different from that of England. Here, we generally suffer from drought; there usually from too much rain.

Dr. Gardner said that he had read and listened to much on thorough draining as practised abroad; but very few in Massachusetts are able to incur the expense, as many would have to mortgage their farms if they did. A cheaper mode must be pursued at present. Besides the pecuniary advantage in draining, it is of great utility as to health, rendering the atmosphere more pure. He had only one piece of land of about five or six acres that needed draining. It had produced only worthless aquatic plants. He dug a main drain three or four feet wide, down into the hard pan, taking off the water from the springs. The sides of the drain were at an angle of 45°. In the succeeding August, he ploughed eight inches deep, harrowed, rolled, then harrowed and sowed to grass, previously applying twenty loads of compost manure to the acre. He had cut two to three tons to the acre of good hay. A man would better not make expensive improvements, and own his farm, than have it under mortgage.

Mr. Edward Brooks, of Boston, would give his

thanks to those gentlemen from abroad, who had given us the modes practised in other countries. He thought great improvements were making in agriculture; and as to the expense of draining, he had a piece of land, at the foot of a hill, which yielded nothing valuable. He made a marginal drain, then lateral drains. Stones were filled in at the bottom, then potato vines, then filled up with soil. This was done last season, and the soil became firm, so that it would bear a team, which it would not before. It promises well, and was not expensive. When land is well drained, the crops may be started a fortnight earlier, and this is frequently of great importance, as the crops will come to maturity before frost. He considered thorough draining of great importance to the farmers of Massachusetts.

Rev. Mr. Sanger, of Dover, said in regard to raising wheat in Norfolk County, that he was on the committee on small grains, in the agricultural society of that county, and three applicants for premium raised twenty-nine bushels to the acre, and one raised thirty bushels. In Ohio, the average yield of wheat is only fifteen bushels to the acre.

Mr. Lewis Kinney, of Wareham, said that he attended the agricultural meetings in 1838, and caught the fever for farming; and he went on to the Cape, and bought land at $3 per acre, which produced nothing of any value. He ditched it, spread on gravel, manured it, and sowed to grass. The whole cost of improvement was $150 per acre. He first improved 3 1-2 acres, and took a premium of $25 for three tons and sixteen-hundreds of hay to an acre. Again he reclaimed 3 1-2 acres, and took another premium of $25. This land had paid him eight per cent. on the investment.

Hon. Mr. Calhoun, late Secretary of State, thought with Dr. Gardner, that thorough draining is too expensive for farmers. There is a vast amount of land in our State now useless, that might be made valuable by draining and subsoiling. Subsoiling is not attended to in the western part of the State. He agreed with Col. Newell, that we suffer in this country from drought; but not so much from wet as in the old country. We ought to stir up the subsoil, and have a resource of moisture to support crops in a dry time. If farmers can be assured that thorough draining can pay well, they will attend to it. Those farmers who go out into the country to farm for pleasure, and have a plenty of money to spend, should be careful how they give examples which others cannot follow without ruin, as they have no money to waste. Such instances are a great injury to the cause of agriculture. Those who make experiments should give a particular account of all the expense attending them, that others may judge of their value. Farmers are afraid to make expensive improvements, lest they fall into the ditches they make, and drain themselves instead of their lands.

Mr. William Parker, of Sudbury, said that he drained a meadow, and in some cases, cut a ditch twelve feet deep, and he conducted the water to his barn, also to the road side, for the public accommodation; then he conducted it on forty or fifty rods to a reservoir; he then conducted it in iron pipes to a place where it was used as a water-power. The iron pipes cost him $300, yet the whole paid him, well though an expensive operation, and his meadow was well drained.

Dr. Loring, of Chelsea, said that this question was intimately connected with political economy; and though he was not practically acquainted with farming, he could perceive that drainage and subsoiling were very important to the community producing an increase of crops, and produce of a superior quality, as Dr. Hogan had stated. As plants are nourished by salts in the earth, it is of the highest importance that the soil should be in a suitable condition to afford this nutriment, for the free passage of the roots where there is no excess of moisture, which tends to the injury of plants, and to render the crops less nutricious and wholesome as food, both for men and animals. Dr. L. then read some remarks of the late Mr. Phinney, of Lexington, on the subject under discussion; also from the late Mr. Coleman, on the great profit that had been made by draining.

Mr. Cunningham, of Lunenburg, said that he owned a farm on which there was a piece of land, twenty acres, that was useless. He made ditches three feet wide; filled up two feet with small stones, then filled up the ditches with soil. It cost him for the improvement $70 per acre. The land now yields two tons of hay per acre.

The president then gave a history of draining and subsoiling, and assigned reasons for their slow progress. He also made general remarks on the subject of agriculture, showing the great improvements that had been made, and were making among us; the vast amount of our agricultural productions as appeared by the late census, and the capability of our soil, if well managed, of yielding a still far greater amount.

For the New England Farmer.

A CHINA HEN.

Mr. Cole:—I have a Shanghae pullet, hatched last April, from an egg purchased of Mr. Hyde, of Newton Corner. She began to lay the 20th of Nov., and in forty-four days, gave me *forty* eggs. She then, (the 3d of Jan.) began to sit. I removed her nest, and on the 11th, she began her second litter, and has laid a dozen of eggs to this day. She is a beautifully formed bird, and now weighs seven pounds. Her mate got lamed, and she was put with a fine Cochin China protector of about her age and weight. On the 22d of Dec., I hatched eight chickens, a cross from this Cochin China and Shanghae pair, and on the 2d of January eight more. These 16 chickens, which are in a light cellar, near my furnace, are all doing well.

If this is a fair specimen of the China hens, for this season of the year, then I go for them. B.

Cambridge, Jan. 24, 1851.

For the New England Farmer.

SUGGESTIONS ON THE PLANTING OF THE POTATO,

AND ITS PRESERVATION FROM DISEASE.

The following suggestions to the agriculturists of the United States, have not been made without experience, study and observation on the subjects referred to; the reader, therefore, will not be troubled with particular and prolex references as to a variety of experiments and calculations. The suggestions given are also made simple as possible, in order to render them plain and practical. Even a partial adoption of the systems suggested, will tend to promote what we so much want. An improved system of agriculture is every day becoming of more importance to a new country, which, in its present social state, may be called largely peopled.

Knowledge and science in agriculture will be tantamount to an increase of the produce of our soil, if brought to the aid of industry; with an improved sytsem of agriculture, the United States are capable of sustaining an unlimited increase of population. In the bountiful arrangements of nature, every thing has its aim and end; and practical farmers must go to work with the aid of science and skill in the cultivation of the potato, and increase the general fertility and produce of the land, establishing a judicious system of restorative, in place of exhaustive husbandry; let all departments of agricultural science be promoted, so as not only to keep pace with, but get the start considerably of the increase of population.

The potato is originally a native of South America, whence it was carried into Europe by the Spaniards, in the latter part of the sixteenth century; it was unknown in Great Brittain or Ireland, till inproduced into Ireland by Sir Walter Raleigh, from Virginia, in 1534; and from a few roots grown in his garden at Zoughal, all the potatoes now cultivated in England, Ireland and Scotland are believed to have sprung. All varieties of potatoes, like most other plants, are subject to disease, but the cause of this malady has not been satisfactorily accounted for. The diseased plant exhibits a distorted and incomplete formation, which I believe to arise from the tuber being unable to supply the young shoots with sufficient nourishment, and expeperience has shown one that the only sure preventative of disease is to change the seed every year, and to adopt a scientific system of culture and preservation.

Great failures have taken place in the potato crops within the last few years, in every part of Europe. The failure has been greater in some districts and soils than in others, and in some places I have seen it confined to portions of the field only. Many persons have written upon this subject. The failures have been ascribed to the seasons, to late planting, to early lifting, to heating of the seed, to the seed being injured by cold, to the potato having degenerated in its vegetative powers, &c., but all is mere conjecture; yet it is satisfactory to know that the evil may, in almost all cases, be remedied by a change of seed every year, and planting in a scientific way.

The potato is deficient in the gluten which wheat possesses, and the ratio of its nutritive quality may be considered as four to one. Nevertheless the potato is highly nutritive, and meal made from it does not differ essentially from arrow-root, tapioca, and sago. When mixed with wheat flour, it renders bread lighter, and easier of digestion; and forms an excellent food for children, and people of weak stomach, which proves the importance of the preservation and culture of this valuable root.

I have directed my attention to the cultivation and preservation of the potato since the year 1845. Knowing the medical, surgical and chemistry professions, gives me an advantage over none-professional men in my research and observations relative to this important subject.

In the month of Sept., 1845, I was professionally employed by a landed proprietor in England to examine into and advise him as to the culture and preservation of the potato. I directed him to select his seed from the middle sized potato, and to have them spread out every fine day on some dry ground, under the action of the air until the potato turned green; this process I inspected myself, which took about one week. Then I had the potatoes stored on hurdles, with a current of air through them. In the month of February following, the seed was planted whole within thirteen inches in the drills, and the drills 30 inches apart; it grew well, and in the month of July the potatoes were ripe and fit for the market; there was no disease or failure whatever in the seed so prepared, other seed not so treated was a total failure on the same farm.

In the month of Sept., 1849, I selected 100 bushels of potatoes in Scotland, and pursued the same system as to their preparation before their removal to England, and I superintended the planting of them in the month of March, 1847, and had them put in the drills whole; they were very prolific and free from disease, and were ripe in the month of August. Good stable dung was used in their culture, as well as in the culture of other potato seed not exposed to the action of the weather; and those not so prepared were a failure, though cultivated in the same field, and planted on the same day. The system recommended and adopted by me in the years 1845, 1846 and 1847, has been continued by this gentleman in subsequent years, and he assures me that it has been successful every year since.

The trouble of changing seed from one part of the country to another, and preparing them as I now describe in the month of September, before the nipping frosts sets in, is not so expensive or formidable that it cannot be overcome by agriculturists, and it is my opinion that those who follow these suggestions will see the utility of the system, and feel convinced that this remedy is more simple, practical and less liable to objection than any other I know, or have yet heard of.

I should recommend to store potatoes intended for consumption on hurdles, or on lumber slats sufficiently close not to allow the potatoes to fall through, yet so far apart as to allow a current of air under, and through the potatoes.

Boston, Jan. 22*nd*, 1851. J. Hogan.

Remarks.—The growing of potatoes, as recommended by Dr. Hogan, has been considerably practised in England, and with good success. In this

country but little attention has been given to the subject, nor has the changing of the seed been attended to of any consequence, as a preventive of the rot.

For the New England Farmer.

HEALTH.

Heaven never granted a richer boon than health; and, without it, all other blessings are comparatively valueless. Yet it is often lightly esteemed and carelessly thrown away, and *never* fully appreciated until it is gone. I have seen the mistress of a splendid mansion, surrounded by every luxury which wealth can command, lying upon her couch, pale and miserable, fretful and unhappy. Within her reach were the most delicate viands and exquisite fruits, yet she could partake of none. Health was no longer hers. She had parted with it for the sake of gratifying her vanity, by wearing thin shoes, to display the beauty of her foot, and now, when consumption was preying upon her, she repented her folly, but it was too late; and though she would willingly give all that she possessed, the priceless treasure could not be recalled. The thin, ghastly-looking gentleman, who reclines in his luxurious easy chair with his gouty foot upon a pillow, sighs and groans in anguish and thinks of the many weary nights of pain, when the bed of down and the silken covering could bring him no repose. How he envies the plough-boy who whistles on the green fields, whose step is elastic and whose heart is light and gay at his toil, while his sleep at night is sound and refreshing.

What is wealth to the invalid but a bitter mockery which can yield no happiness. Then prize the rich boon of health, ye who possess it, and lift your hearts in gratitude to God, even though your lot may be one of poverty and toil. E.

For the New England Farmer.

LOSS OF THE POTATO.

The agitation of this subject cannot fail to elicit much valuable information. Because there is no one prepared to come forward and explain at once, all the incidents connected with the decay of the potato, some are disposed to say, the public are no wiser for the descussion. One thing, at least, I think can be asserted with confidence, that there is *more than one cause* for the decay of the potato; that what is called *the rot*, is an entirely different affection from what is called *the blight* or *the rust*, upon the potato; the blight or rust invariably begins first upon the vines, giving them a discolored and frost-bitten appearance—followed in some instances with the decay of the *tubers*—and in some, without any such decay. A remarkable instance of this occurred the last season, in the extensive fields of potatoes cultivated by Gov. Hill, at Concord, N. H., on which were raised 1800 bushels of sound potatoes; 1000 of which he now has in good condition. In the month of August, about three weeks before they obtained their full growth, they were all at once struck with a blight, that gave them a dark and frost-bitten aspect, and checked their growth, and of consequence cut short the quantity anticipated; nevertheless they so far matured as to be gathered, and to be, as they now are, of much value. This affection upon these potatoes could not have been such as has been experienced in many other places, where the potatoes have decayed and become extremely offensive, soon after they were gathered. No one can question the accuracy of Gov. Hill's statements; for there is no man in N. England who has been more observing, or who has sounder common sense in explaining what pertains to the interests of the farmer. I take it for granted therefore that the *rust* that spread over his potato field, was a different species of annoyance from that which is generally termed the *potato rot;* and the use I would make of this fact is, to encourage farmers in descriminating all the peculiarities of the injuries that happen to their crops, so that they may be assigned to the right class. So long as our observations are general and indefinite, there will be little or no hope of defining the cause, or of applying a remedy. In the diseases affecting the human system, it is not uncommon that very different affections pass under the same name; as for instance *fever* or *consumption*, but no intelligent physician would presume to prescribe for either of these complaints, without knowing the constitution of the patient, and the peculiarities of his situation. The same care and knowledge is needed, in prescribing for vegetable phenomena.

My experience is too limited to have great confidence in my own judgment, but still I cannot but think, that much can be done to remedy the inconvenience complained of by careful attention to selecting seeds, free from taint if possible, and to place them in ground properly manured, and best adapted to their healthy growth.

Danvers, Feb. 1, 1851. J. W. P.

FARM ACCOUNTS.

A friend has sent us a leaf from the coming transactions of the Essex Agricultural Society. We extract the following from an Essay on Farm Accounts. We have not the author's name yet.

The young farmer who expects to enrich his land by some magical process, will be as much disappointed in his expectations as he is ignorant of the process of improvement. A mere theory, even if clearly defined, is idle and useless if unattended with practical observations; and the more practical information a young farmer can acquire, the deeper versed he becomes in the mysteries of his profession—those magical secrets, which enable his more experienced neighbors to bring home money from market. The lawyer finds the mysteries of his profession in almost innumerable volumes of Digests and Reports—the mariner is guided by the science of previous navigators, as laid down in books and on charts—the soldier learns how to manœuvre large bodies of men by reading accounts of successful campaigns—the statesman gleans wisdom from volumes of debates—and the editor seeks the mysteries of catering for the public taste, in old files of popular journals. But where can the young farmer go for dates and details? He may pick up an old Almanac, containing a few memoranda of the domestic life of the writer's cows, and the time his goose commenced her incubation. And some meagre details, thus preserved, convince him that a Diary, kept by any practical farmer in his vicinity, would be a more valuable text book than Loudon's gigantic Encyclopedia.

Washington, as we are informed by Dr. Sparks, kept a diary after he had exchanged his victorious

sword for a pruning-hook, and noted each day's work with minute care. Subsequently, when called to the Presidential chair, we are told that, "He left with his chief manager at Mount Vernon full and minute directions in writing, and exacted from him a weekly report, in which were registered the transactions of each day on all the farms, such as the number of laborers employed, their health or sickness, the kind and quantity of work executed, the progress in planting, sowing, or harvesting the fields, the appearance of the crops at various stages of their growth, the effects of the weather on them, and the condition of the horses, cattle, and other live stock."

Many other distinguished citizens of our republic have since followed the example left by the "farmer of Mount Vernon," and have testified to its benefits. Their recorded praises would occupy pages, and we will simply copy the opinions of one, who, by his moral worth, his purity of character, and his fidelity to the public interests, secured a place in the hearts of his constituents and friends—the lamented Daniel P. King. In a statement made by him to this society, (see Transactions for 1845,) on the management and products of his farm, he says, "I have long kept a sort of diary in which I have noted the employments of each day, the time of planting, hoeing and harvesting, the amount of crops, the cost of animals, current receipts and expenditures, &c. The advantages of keeping a journal, to a farmer, are many. By turning to the pages of past years, he will be reminded of work which should be done in its season; he will see where he has erred, and profit from his experience; he will know where his money, sometimes difficult to account for, goes."

THE GERMAN PRUNE.

Ripens about the 20th of 9th month, size large, common specimens measuring four and a half inches around, egg-shaped, but bulging prominently on one side; suture invisible; color purple, with a deep-blue bloom; stalk green, half an inch long; smooth; adhering firmly to the tree, and inserted in a small circular cavity that is filled by it; flesh adhering to the skin firm; sweet, pleasant, dry, and of rich deep-yellow color; stone free, flat, pitted slightly, prominently convex on one side, with fluted edges, and nearly an inch long.

The above description of a valuable fruit is made up from specimens now in hand, and among its other good qualities, it adheres well to the tree until ripe; high winds disturb it very little; it is not very liable to rot, consequently it can be dried to advantage. Larger quantities are raised in the valley of the Rhine for this purpose, and form no inconsiderable item for exportation. It also bears carriage without injury, and hence is an available fruit to market people who live at a distance from market. Two or three hundred bushels found their way to the Philadelphia market, from the Pigeon Creek District in this county during the past three weeks, and readily commanded $2 a $3 per bushel.

The tree is thrifty in growth and will come into a bearing state in four years from the sprout. It is hardy in every respect, a great bearer, requiring only the ordinary attention to preserve the fruit from the curculio, and an annual crop can be depended on. It blossoms late and thus escapes the frequent untimely frosts that peaches and other early blossoms are subject to. It attains a large size, and lives to a good old age. Hitherto it has been propagated entirely by suckers, and its cultivation has not extended far beyond the district where it was first introduced. It is believed that this fruit could be profitably cultivated upon an extended scale; drying and boxing it for market similar to the imported article. Your readers can be assured that no one will regret planting a couple of these trees on the sunny side of his dwelling, for ornament as well as for fruit. A. B.

Chester County, Pa., 1850.

Phil Dollar Newspaper.

CHEMISTRY FOR FARMERS.

Chemistry is an important guide to the farmer, and he will succeed best who understands and applies, in tilling his land, the important information furnished by that science. There is not so effectual a barrier to agricultural improvement as for farmers to continue their old customs purely because their forefathers did so. But prejudice is fast dying away before the rays of intellectual illumination, and "nature's noblemen"—her farming community—may be found in many sections of the country, who have seceded from the supposed infallibles of those now departed—and who have drank at the fountain of knowledge flowing through the vineyard of reason and philosophy; and they have now arrived at the haven of law, cause, and principle. See its results in the halls of Congress—hear the immortal mind speaking through the husbandman in tones that shall exert an undying influence in the four quarters of the globe.

In the cultivation of the soil it must never be forgotten that animal manures require admixture of milder materials to mitigate their force, for some of them communicate a disgusting or offensive quality to vegetables. They are charged with imparting a biting and acrimonious taste to radishes and turnips. Potatoes and grapes are known to borrow the foul taint of the ground. Millers observe a strong, disagreeable odor in the meal of wheat that grew upon land highly charged with the rotten excrements of cities. The like has been observed in tobacco raised in cow-pens; and stable dung has been accused of imparting a disagreeable flavor to vegetables.

The same effects may be illustrated in the animal kingdom. Ducks are rendered so ill tasted from stuffing down garbage, as sometimes to be offensive to the palate. The quality of pork is known by the food of the swine; the bitterness of partridges has been ascribed to the buds on which they live; and the peculiar flavor of water fowl is rationally traced to the fish they devour. Thus, a portion of the elements of manure and nutrimental matter passes into the living bodies of animals, without being entirely subdued; for example, we can alter the color of the cow's milk by mixing madder or saffron in the food; the odor may be affected by garlic; the flavor may be altered by giving the animal pine, or wormwood; and lastly, the medicinal effect may also be influenced.

There is no doubt but that the most wholesome vegetables are changed by rank manures, so as to hasten their decay. For example, several farmers in this State have within a few days informed me that potatoes "dressed" with manure, generally decayed first.

Hence you will see the importance of mixing lime, and other earths, with the manure. These should be turned over two or three times a year—by this means it will be perfectly assimilated. In manuring the land, should the soil prove light, lime, chalk, plaster, and marl are the best agents to amalgamate with it. In clay soils, sand and carbonaceous earths are proper. In all cases the land should be ploughed deep, so that the soil that has been once subjected to cultivation may be turned down to recover its equilibrium.

Burning generally improves all kinds of land—the flavor of all kinds of grain, fruit, and vegetables are also improved by burnt earth and vegetable ashes.—*Dr. Dadd's Address before East Somerset Ag. Society.*

Mechanics' Department, Arts, &c.

EVERY FARMER HIS OWN MILLER.

This morning I found a note on my table, to wit:—"You are respectfully invited to attend at Prime & Colstocks's sash factory, at 10 A. M., to-day, to witness the operation of Clark's Patent Combined Flouring Mill." I did attend, and the observations of my attendance are here placed at your service.

The mill occupies a space of 4 feet square by 5 feet high, boxed in; the grinding, separating and screening are all worked by one perpendicular shaft. The lower stone revolves and has no gutters on its face or grinding surface. The flour is thrown out by centrifugal force, and is brushed through a wire-gauze screen; this extracts all the glutinous and farinaceous matter from the wheat, while it leaves the bran clean and coarse. On timing it I found it ground at the rate of 4 bushels per hour, (Mr. Clark says it can grind 5 bushels per hour;) I would call the flour extra superfine; I judge from the feeling and appearance of it, but more particularly from eating some of it, baked into bread: it tastes equal to the best Rochester superfine. That it turns out the fullest ratio of flour to wheat, I am satisfied from the cleanness of the bran. Although I cannot comprehensively describe the minutiæ of the bolting (screening) operation, I am prepared to say it is done by an ingenious but truly scientific process. Every one who witnessed its work to-day was astonished at its perfect success, and I think Mr. Clark himself was. The mill is portable, it can be hauled on a one-horse wagon, and I am informed can be furnished for $200. If, as Mr. Clark tells me, it is easily kept in good going order, it will certainly be a great acquisition to the farmer's convenience and independence, if it does not entirely revolutionize the old method of flour-making. Mr. Clark contends that the farina and gluten should come from the mill separately, which is the case in this mill, as the two substances are very different in their consistency.

I deem it unnecessary to say more about it now, as Mr. Clark will shortly have it fully illustrated by engravings and a description, when it will be more fully understood. JOHN WISE.

Lancaster City, Pa., Oct. 22, 1850.

Scientific American.

A FINE BLACK VARNISH FOR COACHES AND IRON WORK.—Take two ounces of bitumen of Palestine, two ounces of rosin, and twelve ounces of umber; melt them separately, and afterwards mix them together over a moderate fire. Then pour upon them, while on the fire, six ounces of clear boiled linseed oil, and keep stirring the whole from time to time; take it off the fire, and, when pretty cool, pour in twelve ounces of the essence of turpentine.—*Scientific American.*

ECONOMY IN BUILDING MATERIALS.

Let us examine whether it would be economy for the farmers to use stone, brick, and iron almost exclusively in building. In most parts of the United States, buildings can be made of wood far cheaper than of any other material. I suppose that a barn built of wood, for instance, which would cost $300, might cost $1,000 if made of stone, brick, and iron. The interest on the excess of cost, $700, at 7 per cent., is $49 per annum, a sum sufficient to build a new frame barn every six years. Would it be economy to expend the $700 in building a barn of imperishablo materials, notwithstanding it might "last a century," or even untold centuries? I fully believe that iron might be economically used in some cases, for building in cities, but I doubt the economy of substituting it for wood, in farm buildings, in a country where wood is so cheap as it is in the United States. It is nevertheless true, that "farmers and others of this country, too frequently build for temporary use." It is still more true, that those do not study economy who, as is very often the case, "build themselves out of house and home." I fear that this would still more often be the case, if farmers generally undertook to follow the advice of Mr. Cooke, and "discontinue the use of all kinds of lumber hitherto employed in the construction of houses." Much more might be said upon this subject.

Ladies' Department.

For the New England Farmer.

MAKING SAUSAGES.

MR. COLE:—Sir,—Although it is a little past the season for making sausages, I send you my receipt for making them, which you can publish if you think it worthy a place in your paper.

When I cut my pork for salting, I remove the bone and rind from the sausage meat, and pack it a convenient thickness, on a smooth board, and lay it away to freeze. When I find it is frozen through, I take a fore plane, set rank, and plane it to shavings, then chop a very little and it is ready for the seasoning, which is, to every 20 lbs. of meat, 8 ounces salt, 2 ounces pepper, 3 1-2 ounces sage, 2 1-2 ounces summer savory, and one teacup of ginger. With or without the summer savory as suites the taste. A SUBSCRIBER.

Ryegate, Jan. 27, 1851.

RECEIPT FOR CHAPPED HANDS.—Melt together equal parts of tallow and white wax; to this add as much olive oil as will give it the consistence of shaving cream, when cold. A few drops of the oil of roses will greatly improve it.

MUTTON BROTH.—Put into a two-quart saucepan one pound of mutton chops, cleared from fat, one onion, half a dozen corns of black pepper, and

three pints of cold water; let it warm gradually, when it boils, skim it, cover the pan close and set it over a gentle fire till the chops are cooked, which will be (if the meat is not too fresh,) in three-quarters of an hour.

STIRABOUT.—Boil one pound of rice in five quarts of water, one hour. Then stir in one pound of oatmeal, and salt to season it, and boil a few minutes. Eat with milk, sauce, or molasses. This is a favorite dish in Scotland.

A DIMINUTIVE PLANT.—A homœopathic phial will hold a dozen of duck weed plants, root, stem, fruit, and everything.

ACKNOWLEDGMENTS.

Of John Washburn, Plymouth, Peck's Pleasant apple, very fair, and of excellent quality. He remarks that this variety, with him, usually yields good crops of fair fruit. There are some cases in which this fruit does well, but generally it is only a poor or moderate grower, and the fruit is often inferior in appearance. Even in Rhode Island, where this variety originated, it is not estimated so high as formerly. Also Tolman Sweeting, very fair specimens. We have very different accounts of this fruit in New England, some cultivators speak highly of it, others say it fails. Mr. W. says that it succeeds finely with him. There are more of this apple in our market, early in winter, mostly from the West, than of all other sweet apples. We hear the Danvers Winter Sweet apple highly recommended all over the country, and so it has been for many years, yet we seldom see a barrel of this fruit in this market, though good sweet apples are in demand throughout the year.

Of Dr. E. S. Kelley, Newburyport, very poor specimens of several poor varieties of apples, knurly and decaying. Mr. K. says this is a fair (if fair can be in deformity,) specimen of what he bought for two barrels of fine Danvers Sweet apples, of a man in Topsfield, whom he met with at the cattle show, and paid him $2,50 per barrel. There is not in the lot before us a single specimen of the true kind. It is a hard case to be thus cheated, especially in the way of good fruit; and it is harder still to seek redress by the tedious and expensive process of litigation, and be compelled to pay a counsellor ten times as much for his services as the value of the article in question, and perhaps be doomed to pay as much more as it would cost to buy land, set out a large orchard, and bring it to a productive state. It is a hard case to be cheated and a still harder one to go into what is called a court of justice for redress, where you are sure to be *fleeced* to a large extent, whether you get the case or not. We ought to have courts in which just awards will be readily and cheaply made.

Of L. H. Spear, Braintree, Vt., a large fine apple, nearly round, slightly oblong; pale yellow ground, mostly covered with red; flesh very tender, pleasant, and of fine flavor. Mr. S. intimates that this may be the Murphy apple. We will not decide on this point, as the Murphy is but little known in this region, though it is the place of its origin. This specimen from Mr. S. is superior in appearance and quality, but he observes that it is not a great bearer. In recently acknowledging the reception of some fruit from Mr. S., the initials of his name are W. M. by mistake.

NOTICES OF PUBLICATIONS.

THE HORTICULTURIST.—This work continues as beautiful and interesting as ever. It treats of the various subjects of horticulture, among which, pomology is a prominent feature, and of rural architecture and landscape gardening, for which the author is distinguished. Luther Tucker, Albany, N. Y., publisher; Jos. Breck & Co., Boston, agents. Monthly, $3 per year.

HOVEY'S MAGAZINE OF HORTICULTURE.—The author of this valuable work is among the most diligent pomologists of the age; he is constantly searching up new fruits, and trying new and old, and instituting close investigations with a view of comparing different varieties, and regulating the confused nomenclature of fruits. Flowers, in all their variety, as well as the most valuable vegetables receive particular attention in this work. Published by Messrs. Hovey, Boston. Monthly, $2 a year.

TRANSACTIONS OF THE PLYMOUTH AGRICULTURAL SOCIETY, from Horace Collamore, Esq., Pembroke, to which we shall refer again.

REPORT OF THE HORTICULTURAL EXHIBITION, UNDER THE ESSEX INSTITUTE; from Dea. S. P. Fowler, of Danvers.

THE WESTERN AGRICULTURIST is an able and interesting work, published monthy, at Columbus, Ohio, at $1. W. W. Mather, Secretary of the O. S. Board of Agriculture, editor.

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